INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

December 11, 2003

TO: Interested Parties / Applicant

RE: «ApplicantName» / «PermitNumber»

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot 9/16/03

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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December 11, 2003

Nick Griswold
Foster Printing Service, Inc.
4295 S. Ohio Street
Michigan City, IN 46360

Re: Registered Construction and Operation Status,
091-18311-00114

Dear Mr. Griswold:

The application from Foster Printing Service, Inc., received on October 31, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following printing operation, located at 4295 S. Ohio Street, Michigan City, Indiana 46360, is classified as registered:

(a) One (1) Heidelburg GTO 1/color 20" offset printing press.

(b) One (1) Solna 164 1/color 25" offset printing press.

(c) Two (2) Heidelburg 1.2F 5/color 40" offset printing presses.

(d) One (1) Diddle Model 2355S 20" 5/color heatset web offset printing press.

(e) One (1) Heidelberg 8/color sheetfed offset printing press.

(f) One (1) natural gas fired dryer rated at 1.1 MMBtu/hr.

(g) One (1) Inkjet printing system consisting of two (2) video inkjets.

The following conditions shall be applicable:

(1) 326 IAC 5-1-2 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity) monitor in a six (6) hour period.

(2) Any change or modification which may increase the potential to emit a combination of HAPs, VOC, NOx, SO2, PM or PM10 to twenty five (25) tons per year, or a single HAP to ten (10) tons per year, from this source shall require approval from IDEM, OAQ prior to making the change.

This registration is the third air approval issued to this source. All previous approvals are superceded as they have been included in this registration. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

AY/EVP

cc: File - LaPorte County
LaPorte County Health Department
Air Compliance - Rick Reynolds
Northwest Regional Office
Permit Tracking
Air Programs Section- Michelle Boner

Registration

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Foster Printing Service, Inc.
Address:	4295 S. Ohio Street
City:	Michigan City
Authorized individual:	Nick Griswold
Phone #:	(219) 879-8366
Registration #:	091-18311-00114

I hereby certify that Foster Printing Service, Inc. is still in operation and is in compliance with the requirements of Registration 091-18311-00114.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Foster Printing Service, Inc.
Source Location:	4295 S. Ohio Street, Michigan City, IN 46360
County:	LaPorte
SIC Code:	2752
Operation Permit No.:	091-18311-00114
Permit Reviewer:	Adeel Yousuf / EVP

The Office of Air Quality (OAQ) has reviewed an application from Foster Printing Service, Inc. relating to the construction and operation of offset lithographic printing presses and inkjet printing operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) Heidelburg GTO 1/color 20" offset printing press.

(b) One (1) Solna 164 1/color 25" offset printing press.

(c) Two (2) Heidelburg 1.2F 5/color 40" offset printing presses.

(d) One (1) Diddle Model 2355S 20" 5/color heatset web offset printing press.

(e) One (1) Heidelberg 8/color sheetfed offset printing press.

(f) One (1) natural gas fired dryer rated at 1.1 MMBtu/hr.

New Emission Units and Pollution Control Equipment

The source consists of the following new emission units and pollution control devices during this review process:

(a) One (1) Inkjet printing system consisting of two (2) video inkjets.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Construction and Operation Permit No. 091-3497-00071, issued April 4, 1994.
(b) Registration No. 091-9400-00114, issued February 27, 1998.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

IDEM is aware that the source failed to apply for a new registration by December 25, 1998 pursuant to rule 326 IAC 2-5.1-3(a) (Permits). IDEM is reviewing this matter and will take appropriate action.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on October 31, 2003.

Emission Calculations

See Appendix A: pages 1 through 7 of this document for detailed emissions calculations.

Uncontrolled Potential Emissions

The table reflects the unrestricted potential to emit.

Pollutant	Potential To Emit (tons/year)
PM	0.00
PM-10	0.00
SO_2	0.00
VOC	17.48
CO	0.40
NO_x	0.70

HAPs	Potential To Emit (tons/year)
Single HAP (Xylene)	7.35
Total HAPs	10.71

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1. A registration will be issued.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year, therefore, the source is not subject to the provisions of 326 IAC 2-7.

(e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) LaPorte County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Source Status

Existing Source (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.00
PM10	0.00
SO_2	0.00
VOC	17.48
CO	0.40
NO_x	0.70

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28

listed source categories.

(b) These emissions were based on the information provided in the source's permit applications (see Appendix A for emission calculations).

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, with total emissions as indicated in this permit R091-18311-00114, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons/year.

This status is based on the revised PTE calculations (see Appendix A).

Federal Rule Applicability

(a) This source is not subject to the requirements of 40 CFR 60, Subpart QQ, Standards of Performance for the Graphics Arts Industry: Publication Rotogravure Printing. This standard applies to each publication rotogravure printing press, that commenced construction, modification or reconstruction after October 28, 1980. This source does not have any rotogravure printing presses and therefore, not subject to the requirements of this rule.

(b) This source is not subject to the requirements of 40 CFR 63.820, Subpart KK - National Emission Standard for the Printing and Publishing Industry. This standard applies to major source of hazardous air pollutants (HAPs), at which publication rotogravure, product and packaging rotogravure or wide-web flexographic printing presses are operated. The printing presses at this source are not subject to the NESHAP, because they are not publication, product and packaging rotogravure printing presses, or wide-web flexographic printing presses, and they are not major for single HAP and combined HAPs.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

Since this source was constructed in 1994 and had a potential to emit air pollutants that were less than 250 tons per year, it was an existing minor source under PSD. It is not in 1 of 28 listed source categories. There has been no modification to the source since its construction, therefore, the source remains a minor source. Therefore, the source is not subject to the provisions of 326 IAC 2-2.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The source emits less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1-1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in LaPorte County which is not one of the specifically listed counties, nor

does the source have the potential to emit CO, VOC, NO_X, PM10 (including fugitive emissions), or SO_2 in amounts at or exceeding one-hundred (100) tons per year. Therefore, the requirements of 326 IAC 2-6 do not apply to the source.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (Volatile Organic Compounds)

This source is not subject to this rule. This rule applies to facilities constructed after January 1980, which have potential VOC emissions of 25 tons or more per year, and are not regulated by any other provisions of 326 IAC 8. All the facilities at this source were constructed after January 1980, but each has potential VOC emissions of less than 25 tons per year, therefore, this rule does not apply.

326 IAC 8-5-5 (Graphic Arts Operations)

This rule applies to packaging rotogravure, publication rotogravure, and flexographic printing sources existing as of November 1, 1980, whose potential emissions of volatile organic compounds (VOC) are greater than one hundred (100) tons per year, or new sources after November 1, 1980, located anywhere in the state, with potential emissions of twenty-five (25) tons per year or more VOC. This rule does not apply because the new printing press is not a rotogravure or flexographic printing press and has potential emissions less than 25 tons per year.

There are no other 326 IAC 8 rules that apply.

Conclusion

The construction and operation of this lithographic printing press operation shall be subject to the conditions of the attached proposed Registration No. 091-18311-00114.

Appendix A: Emission Calculations

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 26, 2003

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity		
Pollutant	Printing Presses	Natural Gas	**TOTAL**
PM	0.00	0.00	0.00
PM10	0.00	0.00	0.00
SO2	0.00	0.00	0.00
NOx	0.00	0.70	0.70
VOC	17.48	0.00	17.48
CO	0.00	0.40	0.40
total HAPs	10.71	negl.	10.71
worst case single HAP	7.35 (Xylene)	negl.	7.35 (Xylene)
See attached spreadsheets from source for full calculations.			
Total emissions based on rated capacity at 8,760 hours/year.			

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity		
Pollutant	Printing Presses	Natural Gas	**TOTAL**
PM	0.00	0.00	0.00
PM10	0.00	0.00	0.00
SO2	0.00	0.00	0.00
NOx	0.00	0.70	0.70
VOC	17.48	0.00	17.48
CO	0.00	0.40	0.40
total HAPs	10.71	negl.	10.71
worst case single HAP	7.35 (Xylene)	negl.	7.35 (Xylene)
See attached spreadsheets from source for full calculations.			
Total emissions based on rated capacity at 8,760 hours/year, after control.			

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 26, 2003

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.1	9.6

One (1) natural gas fired dryer rated at 1.1 MMBtu/hr

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	140.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.7	0.0	0.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 3 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 26, 2003

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.012E-05	5.782E-06	3.614E-04	8.672E-03	1.638E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.409E-06	5.300E-06	6.745E-06	1.831E-06	1.012E-05

Methodology is the same as page 2.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
VOC From Printing Press Operations

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 25, 2003

Potential Uncontrolled Emissions:

Throughput for Packaging Rotogravure Printing Press:

Press I.D.	Maximum Line Speed (ft/min)	Convert Feet to Inches	Maximum Print Width (in)	60 Min/ Hour	8,760 HR YEAR	1/1,000,000	Potential MMin²/Year
Diddle Model Heatset Web	800	12	20.0	60	8,760	1,000,000	100,915
Heidelburg 102F Sheetfed Offset - # 1	163	12	40.0	60	8,760	1,000,000	41,123
Heidelburg 102F Sheetfed Offset - # 2	163	12	40.0	60	8,760	1,000,000	41,123
Solna 164 Sheetfed Offset	122	12	25.0	60	8,760	1,000,000	19,237
Heidelburg GTO Sheetfed Offset	80	12	20.0	60	8,760	1,000,000	10,092
							212,490

PRINTING VOC:

Ink Name	Maxium Coverage lbs/ MMin²	Weight % Organics	Flash Off %	Potential Throughput MMin²/Year	Tons/ 2,000 lbs	VOC Pounds per Hour	VOC Tons per Year
Ink	0.08	35.00%	80%	212,490	2,000	0.54	2.38
Allied Hydro + Fountain Solution	0.02	98.00%	80%	212,490	2,000	0.38	1.67
Solvents	0.07	99.00%	80%	212,490	2,000	1.34	5.89
Dynafount M Fountain Solution	0.01	77.00%	80%	212,490	2,000	0.15	0.65
Total Potential Uncontrolled Emissions:						**2.42**	**10.59**

Controlled and Limited Emissions:

Press I.D.			Control Device	Capture System Capture Efficiency	Thermal/Catalytic Oxidizer Destruction Efficiency	Controlled/Limited VOC Pounds per Hour	Controlled/Limited VOC Tons per Year
			catalytic/thermal oxidizer	0.00%	95.00%	2.42	10.59
Total Controlled Emissions:						**2.42**	**10.59**

Methodology:

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8,760 hours per year = MMin² per Year
VOC = Maximum Coverage pounds per MMin² * Weight percentage organics (volatiles minus water) * Flash off * Throughput * Tons per 2,000 pounds = Tons per Year
Controlled/Limited Emissions = Uncontrolled Emissions * (1 - (Capture Efficiency * Destruction Efficiency)) * VOC Input Limitation (%)

Appendix A: Emission Calculations
VOC From Printing Press Operations

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 25, 2003

Potential Uncontrolled Emissions:

Throughput for Packaging Rotogravure Printing Press:

Press I.D.	Maximum Line Speed (ft/min)	Convert Feet to Inches	Maximum Print Width (in)	60 Min/ Hour	8,760 HR YEAR	1/1,000,000	Potential MMin²/Year
Diddle Model Heatset Web	800	12	20.0	60	8,760	1,000,000	100,915
Heidelburg 102F Sheetfed Offset - # 1	163	12	40.0	60	8,760	1,000,000	41,123
Heidelburg 102F Sheetfed Offset - # 2	163	12	40.0	60	8,760	1,000,000	41,123
Solna 164 Sheetfed Offset	122	12	25.0	60	8,760	1,000,000	19,237
Heidelburg GTO Sheetfed Offset	80	12	20.0	60	8,760	1,000,000	10,092
							212,490

PRINTING VOC:

Ink Name	Maxium Coverage lbs/ MMin²	Weight % Organics	Flash Off %	Potential Throughput MMin²/Year	Tons/ 2,000 lbs	VOC Pounds per Hour	VOC Tons per Year
Ink	0.08	35.00%	80%	212,490	2,000	0.54	2.38
Allied Hydro + Fountain Solution	0.02	98.00%	80%	212,490	2,000	0.38	1.67
Solvents	0.07	99.00%	80%	212,490	2,000	1.34	5.89
Dynafount M Fountain Solution	0.01	77.00%	80%	212,490	2,000	0.15	0.65
Total Potential Uncontrolled Emissions:						**2.42**	**10.59**

Controlled and Limited Emissions:

Press I.D.			Control Device	Capture System Capture Efficiency	Thermal/Catalytic Oxidizer Destruction Efficiency	Controlled/Limited VOC Pounds per Hour	Controlled/Limited VOC Tons per Year
			catalytic/thermal oxidizer	0.00%	95.00%	2.42	10.59
Total Controlled Emissions:						**2.42**	**10.59**

Methodology:

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8,760 hours per year = MMin² per Year
VOC = Maximum Coverage pounds per MMin² * Weight percentage organics (volatiles minus water) * Flash off * Throughput * Tons per 2,000 pounds = Tons per Year
Controlled/Limited Emissions = Uncontrolled Emissions * (1 - (Capture Efficiency * Destruction Efficiency)) * VOC Input Limitation (%)

Appendix A: Emission Calculations
HAPs From Printing Press Operations

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 25, 2003

Potential Uncontrolled Emissions:														
Coating Name	Maximum Coverage lbs/ MMin²	Flashoff %	Potential MMin²/Year	Weight % Methanol (as applied)	Weight % Xylene (as applied)	Weight % Glycol Ether (as applied)	Weight % Methylene Chloride (as applied)	Weight % Ethylene Glycol (as applied)	Mthanol Emissions (tons/yr)	Xylene Emissions (tons/yr)	Glycol Ether Emissions (tons/yr)	Methylene Chloride Emissions (tons/yr)	Ethylene Glycol Emissions (tons/yr)	TOTAL HAP Emissions (tons/yr)
Ink	0.08	80.00%	212,490	0.0%	0.0%	0.0%	0.0%	0.0%	0.00	0.00	0.00	0.00	0.00	0.00
Allied Hydro + Fountain Solution	0.02	80.00%	212,490	0.0%	0.0%	0.0%	0.0%	24.0%	0.00	0.00	0.00	0.00	0.41	0.41
Solvents	0.07	80.00%	212,490	17.0%	83.0%	0.0%	0.0%	0.0%	1.01	4.94	0.00	0.00	0.00	5.95
Dynafount M Fountain Solution	0.01	80.00%	212,490	0.0%	0.0%	11.0%	2.0%	0.0%	0.00	0.00	0.09	0.02	0.00	0.11
Total Potential Uncontrolled Emissions:									**1.01**	**4.94**	**0.09**	**0.02**	**0.41**	**6.47**
Total Controlled Emissions:									**1.01**	**4.94**	**0.09**	**0.02**	**0.41**	**6.47**

Methodology:
HAPs = Maximum Coverage pounds per MMin² * Wight percent volatile * Weight percentage HAPs * Throughput * (1 ton/2,000 lbs) = Tons per Year
Controlled/Limited Emissions = Uncontrolled Emissions * (1 - (Capture Efficiency * Destruction Efficiency)) * VOC Input Limit (%)

Appendix A: Emission Calculations
VOC From Printing Press Operations

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 25, 2003

A. One (1) Heidelberg 8-color Sheetfed Offset Lithographic Printing

VOC Emissions

				Potential Emissions		
Ink/Cleaning Solvent	Maximum Usage (lb/hr) *	VOC Content (wt. %)	Flast Off (% VOC emitted)	(lb/hr)	lb/day	ton/yr
Sheetfed Inks & Varnishes	0.9348	15.00%	5.00%	0.01	0.17	0.03
Blanket Wash #3656	0.6293	100.00%	100.00%	0.63	15.10	2.76
Roller Wash #3552	0.5142	98.00%	100.00%	0.50	12.09	2.21
Dyna Kleen	0.0087	10.00%	100.00%	0.00	0.02	0.00
Metering Roller Cleaner	0.0226	29.30%	100.00%	0.01	0.16	0.03
Anti-Skin Spray	0.0028	100.00%	100.00%	0.00	0.07	0.01
Allied Hydro Plus	0.2015	79.00%	100.00%	0.16	3.82	0.70
Allied L.L. Plus Fountain Solution	0.1813	18.00%	100.00%	0.03	0.78	0.14
Anti-Static Spray	0.0011	90.00%	100.00%	0.00	0.02	0.00
Total:				1.34	32.24	5.88

Notes:
* Maximum usages are taken directly from Construction Permit No.: 091-9400-00114, issued on February 27, 1998.

B. Two (2) Video inkjets for Inkjet Label Printing System.

VOC Emissions

				Potential Emissions		
Ink/Cleaning Solvent	Maximum Usage (lb/hr) *	VOC Content (`lbs/liter)	Flast Off (% VOC emitted)	(lb/hr)	lb/day	ton/yr
Inkjet Ink	0.10	0.01	100.00%	0.10	2.41	0.44
Makeup Fluid & Cleaning Solution	0.13	0.00	100.00%	0.13	3.10	0.57
Total:				0.23	5.51	1.01

* Maximum usage is provided by the source.

Methodology:
VOC Emissions (ton/yr) = Max. Usage (lb/hr) x VOC content (wt. %) x Flash Off (% VOC emitted) x 8760 hr / yr x 1 ton / 2000 lb.

Appendix A: Emission Calculations
VOC From Printing Press Operations

Company Name: Foster Printing Service, Inc.
Address City IN Zip: 4295 S. Ohio Street, Michigan City, IN 46360
Permit No.: 091-18311-00114
Reviewer: Adeel Yousuf / EVP
Date: November 26, 2003

Material	Calculated VOC Emissions (ton/yr)	Weight % Xylene	Weight % methanol	Weight % ethylbenzene	Weight % glycol ethers	Weight % dichloromethane	Weight % cumene	Weight % ethylene glycol	Xylene Emissions (ton/yr)	Methanol Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Dichloromethane Emissions (ton/yr)	Cumene Emissions (ton/yr)	Ethylene Glycol Emissions (ton/yr)	Total
Sheetfed Inks & Varnishes	0.03	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blanket Wash #3656	2.76	84.40%	15.80%	17.30%	0.00%	0.00%	0.00%	0.00%	2.33	0.44	0.48	0.00	0.00	0.00	0.00	3.24
Roller Wash #3552	2.21	3.30%	0.00%	0.00%	13.00%	1.80%	1.40%	0.00%	0.07	0.00	0.00	0.29	0.04	0.03	0.00	0.43
Dyna Kleen	0.00	5.00%	0.00%	0.00%	0.00%	0.00%	4.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metering Roller Cleaner	0.03	25.00%	0.00%	10.00%	0.00%	65.00%	0.00%	0.00%	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.03
Anti-Skin Spray	0.01	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Allied Hydro Plus	0.70	0.00%	0.00%	0.00%	51.00%	0.00%	0.00%	24.00%	0.00	0.00	0.00	0.36	0.00	0.00	0.17	0.52
Allied L.L. Plus Fountain Solution	0.14	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02
Anti-Static Spray	0.00	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inkjet Ink	0.44	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Makeup Fluid & Cleaning Solution	0.57	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Uncontrolled Potential HAP Emissions (ton/yr):									2.41	0.44	0.48	0.66	0.06	0.03	0.17	4.24

METHODOLOGY

HAPS emission rate (tons/yr) = VOC Emissions (tons/yr) x Weight % HAP Content (%).